

DICTATOR Lift Shaft System

The Modular Lift Shaft System, also for Retrofitting Certified According to EN 1090

A lift is becoming more and more important for daily life, not only in newly constructed buildings but also when modernizing existing houses.

The DICTATOR **modular lift shaft system** offers the ideal solution for all cases where a concrete lift shaft is not available or cannot be built for architectural reasons or lack of space.

Under the Construction Products Regulation 305/2011/EU only shaft systems may be mounted which have been **certified** according to EN 1090 and the production of which is subject to constant supervision. The DICTATOR lift shaft system meets these demands.

More **essential advantages:**

- Solid, self supporting system
- Easy installation without dirt because all components are bolted together.
- Modular and therefore very flexible
- Offers various individual designs.
- For interior and exterior installation
- Retrofitting into existing houses
- Comes prepared for the lift to be fitted into the lift shaft system (brackets to hold the rails, space to house the machinery on top etc.).
- Complete installation from inside the shaft



Technical Data



Certified according to EN 1090 in accordance with the Construction Products Directive 305/2011/EU

Rated load of the lift	max. 600 kg for lifts with rear rails max. 750 kg for lifts with lateral rails
Type of lifts	all types, hydraulic and electrical
Max. interior dimensions	1950 x 1950 mm
Max. height of the shaft	26 m
Finish	polyester powder coated for outdoors: additionally hot galvanized
Certificate of conformity	0035-CPR-1090-1.00963.TÜVRh.2014.001

Components

Components

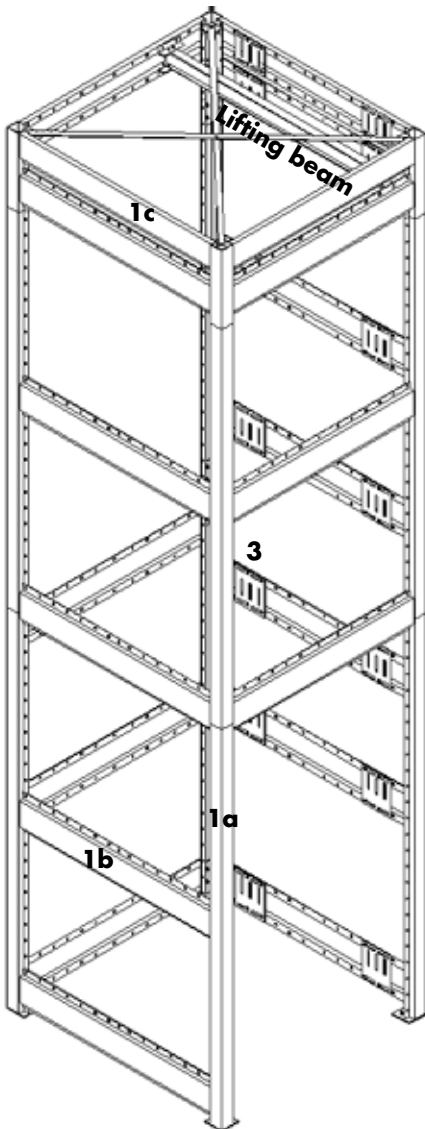
The DICTATOR lift shaft system consists of various components. Varying combinations of the standard elements permit to adapt the lift shaft system to the most different requirements. This permits an economic, efficient production without reducing the possibilities for a bespoke, flexible design. The main components are described in the following (see also illustrations no. 1, 2 and 3).

1) Load carrying components

- a) Columns
 - Standard 80 x 80 mm
(The columns on the sides where the rails are fixed must always be of the standard profile 80 x 80 mm.)
 - Opposite sides 80 x 35 mm possible;
 - Special profiles on demand
- b) Crossbeams
- c) Upper beams with the lifting beam for installation and maintenance

2) Reinforcements (depend on the lift to be built into the lift shaft)

- a) Reinforcements in the columns
- b) Diagonal braces between the beams (depend on the size of the lift shaft, the type of facing, the rated load)



Ill. 1: Load carrying components of the shaft system



Ill. 2: Components of the DICTATOR lift shaft system

3) Fixing brackets for the rails

Fixing brackets or plates, depending on the type of lift and rails, prepared to be bolted to the shaft system. They are normally produced to fit the rail fixtures used by the lift erecting company. Oblong holes in the brackets/plates permit an easy fitting and adjustment of the rail fixtures.

Components - continued



Ill. 3 a/b: Examples of fixing brackets/plates for the rail fixtures of the lift companies



Ill. 4a: Lift shaft with closed sheet steel panels...



Ill. 4b: ...or perforated panels

4) Facings

- a) Closed sheet steel panels
- b) Perforated sheet steel panels
- c) Frames for window panes (supplied by the customer)
- d) Special designs or preparation for those on demand (indicate weight and dimensions - for static reasons)



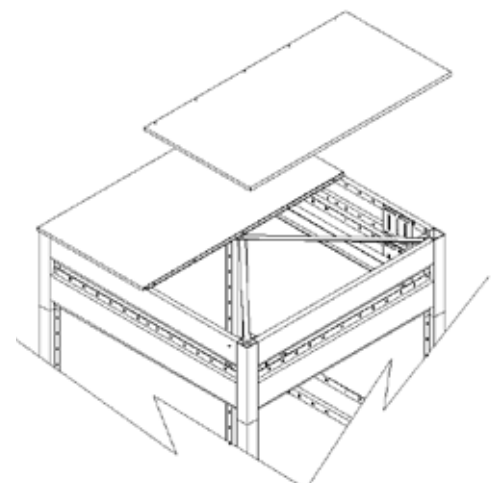
Ill. 4c: Lift shaft with window panes



Ill. 4d: Special design: lift shaft closed with sandwich panels

5) Roof

- Normally made in two parts,
- a) straight for interior use
 - b) slightly inclined for exterior use



Ill. 5: Construction of the roof

Technical Data

Materials

Upper beams (depend on the type of lift)	hot-drawn U-profiles or normal beams	
Columns, beams, reinforcements, brackets/plates for the rail supports	4 mm thick sheet steel, cold formed	
Panels, roof	1.5 mm thick sheet steel	
Bolts	for the columns	M 12
	for the beams, panels	M 10

Finish

For interior use	powder coated, light textured paint finish for colours see separate table (sent on demand)
For outdoors	Hot galvanised and powder coated (colours as above)

Load / Fastening of the Shaft

Columns	each standard column (80 x 80)with reinforcement	2500 kg
Lifting beam	max.	1000 kg

Those loads are valid for lift shaft systems being installed inside a building or if outdoors are leant and fixed directly to the building.

At least 2 columns of the lift shaft have to be fixed every 3 m in the vertical. In order to assure the smooth and reliable function of the door operators, this has always to be on the side of the access (see ill. 6a/6b).



Ill. 6a



Ill. 6b

Weather-Proofness, Static Calculation, Dimensions

Ventilation / Insulation

The necessary ventilation of the lift shaft is achieved by using perforated sheet steel panels below the upper beams. It depends on the area and the travel.

The standard lift shaft system with sheet steel panels or window panes is not insulated and waterproof. When the lift shaft is installed outdoors, it is sealed on site with silicone.

If the lift shaft system has to be insulated and sealed, it is possible just to use the load carrying components and reinforcements without panels. The shaft can then be covered e.g. with sandwich panels (see ill. 4d) or an aluminium framework with window panes can be fixed to the shaft system. A further possibility is e.g. to close the shaft from the outside with a simple brick wall or a dry construction and apply plaster (see ill. 7).



Static Calculations

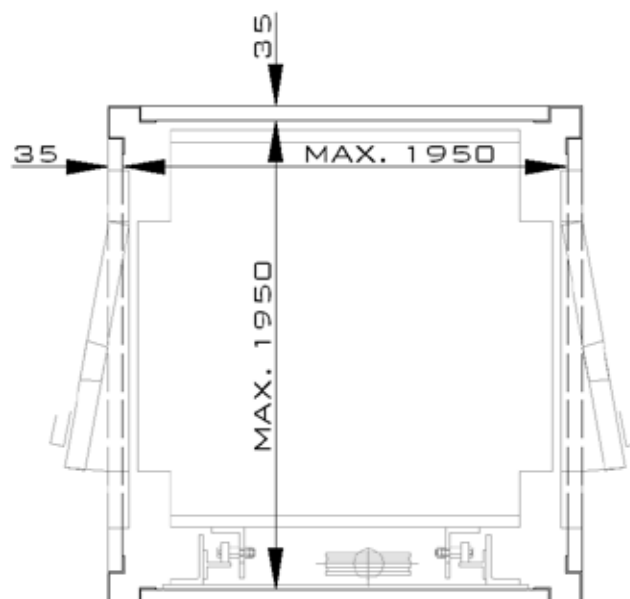
A general static calculation for the maximum dimensions (height 26 m, inner dimensions 1950 x 1950 mm) is available. An abbreviated version of this calculation can be provided without charge.

If the lift shaft is panelled by the customer, the aprox. weight and the type of paneling must be indicated in the order. DICTATOR then verifies whether the basic data of the standard static calculation are still valid.

On demand DICTATOR can also provide a detailed static calculation. This is always necessary, when the lift shaft is installed at more than 1.5 m distance from the building, when special wind conditions apply or a paneling with high own weight is used. This static calculation is charged separately.

Dimensions

Inner dimensions max. 1950 x 1950



Variations / Required Data

Variations

The DICTATOR lift shaft system offers both **technical and architectural versatility**. It is **individually designed**, thus optimising the coordination of the requirements of the installed lift and the design of the installation site.



Required Data

For an **offer** the following information is required:

- Dimensions of the site for the lift shaft and the travel/total height
- Lift to be installed
- Pit and headroom (height available from the floor of the upper landing to the ceiling)
- Design (sheet steel panels, window panes etc.)
- Inside or outdoor installation

In case of an **order** the following additional data:

- Binding installation plan with horizontal and vertical projections and all necessary dimensions
- Detailed drawing of the rail fixing brackets
- Detailed drawing of the landing doors
- Detailed drawing of the vertical projection of the access side to the lift shaft.

If the DICTATOR lift shaft system is used in combination with the DICTATOR home lift DHM 500 or the lift DHE, we just need the information concerning the design of the lift shaft.